

REMARKS/ARGUMENTS

The present Response is responsive to the non-final Office Action mailed June 16, 2008 in the above-identified application.

Claims 1-9 are the claims currently pending in the present application.

Rejection of Claims 1-9 under 35 U.S.C. § 112, First Paragraph

Claims 1-9 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement on the ground that the claimed subject matter was not described in the Specification in such a way as to reasonably convey to one of ordinary skill in the art that at the time of the invention the inventors had intellectual possession of the claimed invention. The Office Action alleges that the recitation in claim 1 “moving the bonding tool from the first position towards the first bonding point and applying a pressing force on the first bond with the wire but without forming a second bond of the wire” is new matter not fully supported by applicant’s disclosure.

The Specification, page 5, lines 20-24 describes after the formation of the first bond at first bonding point A₁ of the first bonding surface 14, the capillary 10 moves the wire to points B₁ and C₁ so as to form a bend in the wire (Specification, page 5, lines 24-29; Fig. 2(a)). The capillary 10 then moves down towards the first bonding point A₁ to point D₁ where the wire 12 is pressed down. (Specification, page 5, lines 31-34). This process is described as a “coupling process” in which a predetermined force and ultrasonic energy are applied under the first bond to couple the wire 12 at the capillary opening to the first bond (Specification, page 5, line 34 – page 6, line 2).

This coupling process “serves to prevent subsequent damage to the loop neck” (Specification, page 6, lines 2-3) and ensures that the highest point of the wire loop relative to the first bonding point is less than or equal to 2.35 times the wire diameter (Specification, page 5, lines 32-34).

Thus, while described as a “coupling process,” no bonding is caused by this action. Read in context, the term “to couple” means merely to contact the wire to the first bond. “To bond,” on the other hand, means to cause a permanent sticking of one surface to another. Thus, as disclosed in Ano, U.S. Patent No. 6,815,836, the center of the wire is aligned with the center of

the first bond in order to form a second bond onto the first bond “thus bonding the wire 405 to itself near the ball” (Ano, column 5, lines 30-35; Figs. 4D-4E).

As shown in Figs. 3(a)-3(d) of the Drawings of applicant’s disclosure, at Fig. 3(c), the center of the capillary is offset from the center of the first bond and the first bonding point A_1 . At Fig. 3(d), the capillary is lowered to D_1 , where the wire may be made to contact and press onto the first bond. At D_1 as well, the center of the capillary is offset from the center of the first bond. This is further shown in Fig. 2(a) where C_1 and D_1 are aligned substantially along a line vertical to the first bonding point A_1 .

Thus, since the center of the capillary 10 is shown as not aligned with the center of the first bond, and the wire position is offset from the first bond, a second bond of the wire cannot be formed onto the first bond. As explained, the word “couple” does not mean bonding, and the second bond, according to the present invention as claimed in claim 1, is formed only at the second bonding point 1.

More generally, it is respectfully submitted that applicant is entitled to be his own lexicographer and uses terms in the Specification with care. Accordingly, the term “bond” is a permanent affixing or adhesion and should be interpreted according to what is sometimes known as the “plain meaning rule”: a word means what is said and does not mean anything else unless otherwise indicated. Accordingly, if applicant had intended to state that at point D_1 there is a bond formed then he would have used the term “bond” in the Specification. That is, the reason that a word other than “bonding” is used to describe the process at D_1 is because applicant did not mean to create a bond at D_1 . Applicant uses the word “couple” and not “bond.”

Further support for this understanding of the word “coupling” can be gleaned from applicant’s disclosure of the second embodiment which describes that, at point E_2 , the capillary 10 also “applies force and ultrasonic energy to couple the wire 12 at the opening of the capillary to the first bond” (Specification, page 8, lines 3-6; Figs. 5(a) and 6(a)-(f)). The steps performed according to this second embodiment after the formation of the first bond A_2 and before the aforementioned step at point E_2 , include a reverse action motion from point B_2 to point C_2 in a curved motion so as to bend the wire 12 in a curved trace outside a vertical plane passing through the first bonding point A_2 and the second bonding point J_2 . This “curved motion helps to avoid neck crack so that the loop base will not be damaged by subsequent forward motion of the

capillary 10" (Specification, page 7, lines 27-31). It will be understood that forward motion in this context means motion toward second bonding point J_2 .

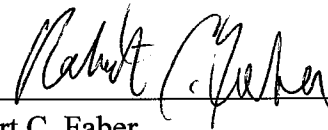
Thus, if applicant had disclosed the formation of another bond at point E_2 by use of the term "to couple," it is difficult to see how this curved motion could be helpful to prevent neck cracking at the loop base and to avoid damage "by subsequent forward motion of the capillary." That is, the play introduced by the curved motion from B_2 to point C_2 seems to be helpful in mitigating any potential stress on the wire during forward motion of the capillary only if no further bond at E_2 is created. Thus, the term "to couple" at points D_1 and E_2 could not have meant to form a second bond between the wire and the first bonding point because that would seem to vitiate the goal of the previous step, i.e., the goal of the curved motion helping to avoid wire neck cracking during subsequent forward motion. Therefore, the term "to couple" as used in the above-cited passages means merely to draw near, contact or press into. Accordingly, the term "but without forming a second bond to the wire" of claim 1 is fully supported by applicant's disclosure.

Claims 2-8 depend from claim 1 and are therefore patentably distinguishable over the cited art for at least the same reasons.

In view of the foregoing discussion, withdrawal of the rejection and allowance of the application are respectfully requested.

Respectfully submitted,

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